

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A measuring transformer for comparing a current flowing through a conductor to a reference current comprising:

a magnetic circuit formed by a toroidal core;

~~the~~ a conductor through which the current flows and which is enclosed by the toroidal core;

a secondary winding arranged on the toroidal core;

a magnetic flux measuring element which is arranged in a gap of the toroidal core and which is sensitive to ~~the~~ magnetic field in the gap;

a reference setting unit for ~~providing~~ acting on the secondary winding with a predefined reference current ~~which sets the current which is to flow in the conductor through which current flows, and wherein~~ the magnetic flux measuring element ~~being~~ is adapted to deliver a difference signal representative of the difference between the reference current and the current flowing through the conductor.

2. (Currently Amended) A measuring transformer according to claim 1, ~~wherein characterized in that~~ the magnetic flux measuring element is a Hall element.

3. (Currently Amended) A measuring transformer according to claim 1, further comprising an amplifier ~~characterized in that~~ connected downstream of ~~an~~ the output of the magnetic flux measuring element ~~is an amplifier~~ for amplifying ~~an~~ the electrical output signal of the magnetic flux measuring element.

4. (Currently Amended) A measuring transformer according to claim 1, ~~further comprising~~ ~~characterized in that there is provided~~ a control unit for controlling the current flowing through the conductor, in such a way that the current flowing through the conductor approximates to the reference current.

5. (Currently Amended) A measuring transformer according to claim 1, ~~further comprising~~ ~~characterized in that to form the absolute value in respect of the current to be measured~~ a superimposition means ~~are connected downstream of the magnetic flux measuring element for superimposition of the reference current with~~ an ~~the output signal of the magnetic flux measuring element for determining an absolute value of the current flowing through the conductor.~~

6. (Currently Amended) A measuring transformer according to claim 1, ~~further comprising~~ a control unit electrically coupled to the magnetic flux measuring element and the reference setting unit ~~for controlling or regulating the~~ a current flowing through the ~~conductor with a measuring transformer according to claim 1 for measuring the current flowing through the conductor.~~

7. (Currently Amended) A measuring transformer according to claim 6, ~~wherein the current flowing through the conductor is~~ An inverter, in particular for a wind power installation, having a control unit according to claim 6 for controlling the an inverter ~~output current of the inverter.~~

8. (Canceled) An inverter according to claim 7 characterized in that the reference setting unit is a component part of the inverter.

9. (Canceled) A wind power installation having an inverter according to claim 7.

10. (New) A measuring transformer according to claim 1, wherein the reference setting unit is a current source.

11. (New) A measuring transformer according to claim 6, wherein the control unit is a microcontroller.

12. (New) A method for comparing an inverter current to a predetermined reference current, the inverter current generated by an inverter unit driven by a wind power installation, the method comprising the steps of:

generating a first magnetic flux in a toroidal core by passing the inverter current through the toroidal core, the toroidal core having an air gap;

generating a second magnetic flux in the toroidal core by passing the predetermined reference current through a secondary winding, the secondary winding arranged on at least a portion of the toroidal core;

detecting a third magnetic flux in the gap of the toroidal core, the third magnetic flux being a combination of the first and second magnetic fluxes such that the third magnetic flux is proportional to the deviation of the inverter current from the predetermined reference current; and

generating an output signal based upon the third magnetic flux.

13. (New) The method of claim 12, further comprising the step of amplifying the output signal.

14. (New) The method of claim 12, further comprising the step of superimposing the output signal with the predetermined reference current to obtain an absolute value of the inverter current.

15. (New) The method of claim 12, further comprising the step of comparing the output signal to the predetermined reference current to generate a control signal for regulating the inverter current.

16. (New) The method of claim 15, wherein the control signal regulates the inverter current by modifying the inverter current to approximate the predetermined reference current.

17. (New) A wind power installation, comprising:
an inverter for generating an inverter current;
a conductor coupled to the inverter in which the inverter current flows; and
a toroidal core enclosing the conductor, the toroidal core having at least one air gap and a secondary winding in which a predetermined reference current flows, the secondary winding arranged on at least a portion of the toroidal core.

18. (New) The wind power installation of claim 17, further comprising a magnetic flux measuring element positioned in the at least one air gap for generating an output signal based upon a magnetic flux detected in the at least one air gap, the output signal representative of the deviation of the inverter current from the predetermined reference current.

19. (New) The wind power installation of claim 18, further comprising a control unit electrically coupled to the magnetic flux measuring element and the conductor for generating a control signal based upon the output signal to regulate the inverter current.

20. (New) The wind power installation of claim 19, wherein the control signal regulates the inverter current by modifying the inverter current to approximate the predetermined reference current.

21. (New) The wind power installation of claim 18, further comprising a reference presetting unit coupled to the secondary winding for generating the predetermined reference current.

22. (New) The system of claim 21, further comprising a summing unit electrically coupled to reference presetting unit and the magnetic flux measuring element for superimposing the output signal with the predetermined reference current to generate an absolute value of the inverter current.